trivial names of the parent species may undergo its own applicability rests solely on the basis of priority." Accordingly Trelease here gives binomial names to all the better attested American hybrid oaks, mostly (as in the instances of *Q. Deamii* and *Q. Hillii*) without descriptions, reference to previous literature, or citation of specimens. Actual valid establishment of most of the new names in this article would date, in event of any question of priority arising, from the following work of 1924.

16. TRELEASE, WM. The American Oaks. Mem. Nat. Acad. Sci. XX. Washington, 1924.

In his key to the *Albae* which indicates the characteristics of some of the other known or supposed hybrids with *Q. alba*, × *Q. Deamii* is not included. Instead it is placed with the chestnut oaks (Prinoideae). × *Q. Hillii* is to be found in the key to the Macrocarpae, (p. 107) but Trelease apparently doubts the parentage, for he refers to it as a "supposed hybrid" between *Q. macrocarpa* and *Q. Muehlenbergii*. (Incidentally, he insists upon preserving the "e" that Engelmann put into Muhlenberg's name to represent the umlaut u, although Muhlenberg himself spelled his name with no umlaut. It would appear that the commonly accepted spelling, with u instead of ue, should continue to be preferred.)

SPECIES NEWLY OR RARELY REPORTED FROM NOVA SCOTIA AND CAPE BRETON ISLAND

D. S. ERSKINE

THE publication of Roland's "Flora of Nova Scotia" in 1944–5, by providing a point of reference, and the funds made available for research in the brief interval between "outbreaks of mutual defence," have recently given impetus to the botanical exploration of this province. Most of the collections reported were made in connection with a forest ecology survey, financed by the Nova Scotia Research Foundation, by successive summer parties of students led by Dr. E. C. Smith of Acadia University. Collections made by the same parties on Brier Island with Dr. A. E. Roland are to be reported elsewhere. Also excluded are some collections of introduced plants as yet uncertainly identified.

Although the following records are based primarily on the specimens in the Acadia University herbarium,[1] these in some cases are duplicates of collections which were made for other

[1] Thanks are expressed to the members of the Biology Department for making this collection freely available.

botanical institutions. I wish to thank Dr. Roland for reading the manuscript while it was being prepared and for the records based on his collections made for the herbarium of the Agricultural College at Debert; Dr. W. G. Dore, for placing at my disposal unpublished notes on grasses, based on his and Eville Gorham's collections made for the herbarium of the Dominion Experimental Farm at Ottawa; Dr. H. P. Bell, for looking up in the Dalhousie University herbarium the data for certain records; and Miss M. S. Brown, for permission to report her recent discoveries. I am indebted to Dr. Smith and to J. S. Erskine for their continuing advice and collaboration.

Asplenium viride Huds. Cumberland Co.: rock crevices, two miles above Jeffers Falls Crossroads, *C. J. Bishop & I. V. Hall*, July 1, 1949. This collection would seem to reinstate MacKay's old record from Moose River, Cumberland Co., and confirms its presence on the mainland of the province. A third Cape Breton collection may be added to the fifty-year old records of Macoun and C. B. Robinson, also in Inverness Co.: mossy cliffs below the waterfall, south branch of Grand Anse Brook, Pleasant Bay, *E. C. Smith, D. S. Erskine, D. R. Sampson & F. C. Bent 4056*.

Woodwardia virginica (L.) Sm. Inverness Co.: very abundant in sphagnum-black spruce swamp, West Lake Ainslie, *E. C. Smith, D. S. Erskine, E. H. Collins & W. B. Schofield 1191*[2]*; E. C. Smith, E. H. Collins, J. M. Bruce, D. R. Sampson & F. C. Bent 3856*. The northeastern range-limit of this species is extended from Pictou to Cape Breton Island. The following collection in the herbarium of Dr. G. C. Warren (recently donated to Acadia University)—Prince Edward Island: Southport, Queens Co., *Smallwood*, Sept. 1903—confirms Roland's report from that province (Proc. N. S. Inst. Sci. *20* (3): 77), omitted from the range given in his Flora and in the eighth edition of Gray's Manual.

Potamogeton amplifolius Tuckerm. Inverness Co.: slow water, Au Coin Brook, Cheticamp, *SECS 1149*. Local range extended northeastward in the province from Kings Co. to Cape Breton.

P. praelongus Wulf. Inverness Co.: Pembroke Lake, *D. A. Livingstone*, Aug. 22, 1949. This is the first Cape Breton station for this species, which has, according to Dr. Roland, been found abundant at the one old station (MacKay's in Earltown Lakes) by various recent collectors, and occurs also in Kings Co.: Cornwallis River above Kentville, *J. P. Kelsall*, June 1946.

Sagittaria latifolia Willd. Inverness Co.: pond behind beach, Margaree Harbour, *SECS 1146*. The northeastern range-limit is extended to Cape Breton by this collection of the forma *gracilis* (Pursh) Robinson.

Sagittaria cuneata Sheldon. Inverness Co.: muddy pond edge, Cheticamp, *E. C. Smith, E. H. Collins, J. M. Bruce & D. R. Sampson 2777;* muddy shallows of garbage-strewn lake, Le Grand Lac, Grand Etang, *D. A. Livingstone*, Aug. 22, 1949; in brook near beach, Margaree Harbour, *SECS 1145;* upright in mud, stream at Hayes River, *SCBSB 3891*, leaves floating, *3892;*

[2] Collections of the forest ecology party of 1948 are subsequently designated by the initials *SECS*, the collections of 1949 by *SCBS*, and those of 1950, *SCBSB*.

Victoria Co.; muddy borders of pond, South Gut St. Ann's, *SECS 894*. The northeastern limit is extended from Pictou to Cape Breton, where this seems the common species of the genus.

Elodea canadensis Michx. (*Anacharis* Planch.) Colchester Co.: in an artificial pond, Debert, *SECS 136*. This first station for the province was discovered and indicated to us by Dr. Roland. Since the pond is frequented by waterfowl and a prospective sanctuary, it seems possible that this recent introduction was intentional or accompanied an unsuccessful introduction of wild rice.

Briza media L. Hants Co.: abundantly naturalized in grass around Kings College School, Windsor, *D. S. Erskine*, June 18, 1951. The only previous report from the province was Macoun's from Digby forty years ago. The new Manual does not indicate the naturalization of this species in the Maritime Provinces.

Lolium multiflorum Lam. Halifax Co.: ballast, Halifax, *E. Gorham 45. 1319B*. "The Italian rye-grass, which differs from *L. perenne* in the presence of awns on the lemmas and in the rolled leaves, was collected in admixture with the latter on ballast at Halifax. This adds another species to the introduced grass flora of Nova Scotia"—Dore, ms.

Deschampsia cespitosa (L.) Beauv., var. **parviflora** (Thuill.) Richter. Colchester Co.: by railroad tracks, Stewiacke, *A. E. Roland & W. G. Dore 45.1003;* Pictou Co.: by fair grounds, New Glasgow, *W. G. Dore & E. Gorham 45.459*. "This variety is a European plant introduced in certain localities in New England, but not formerly reported for Canada. It is so different from our native var. *glauca* (Hartm.) Lindm. in its tall stature, ample panicle and basal tufts of stiff coarse leaves that it is readily separated. It grows in dry open sites by towns and cities rather than on the moist gravelly shores of lakes and streams, which further marks it as adventive. The three widely separated points where it was collected in 1945 represent independent introductions (a third station was found at Saint John, N. B., *W. G. Dore & E. Gorham 45.933*)"—W. G. Dore, ms.

Calamagrostis neglecta (Ehrh.) Gaertn., Mey. & Scherb. (det. W. G. Dore) Victoria Co.: larch bog, Big Baddeck, *SECS 1059*. This collection, first from Cape Breton, is the third from the province, the second being that reported from Beaver Lake, Yarmouth Co., by Louis-Marie in RHODORA *46:* 297–8. 1944.

Agrostis canina L. Pictou Co.: old field near New Glasgow, *H. A. Senn, W. G. Dore & E. Gorham 45.476;* a report for Halifax Co.: Prospect Road (Dore, in litt.). Since the presence of this species on the mainland was not indicated by Dore and Roland (Proc. N. S. Inst. Sci. *20* (4): 247. 1942), it seems desirable to include it in this paper. With the typical plants at New Glasgow collections were also made from clones lacking purple coloration, a form for which Dore finds the name var. *varians* Asch. & Graebn. available (*Senn, Dore & Gorham 45.477*).

Alopecurus aequalis Sobol. (*A. aristulatus* Michx.) Inverness Co.: pond edge, Kenloch (Strathlorne Station), *SECS 1195*. Although reported from Margaree Harbour by Roland (Can. Field Nat. *52:* 106. 1938), no Cape Breton stations are shown on the distribution map in Dore and Roland's Grasses.

Muhlenbergia glomerata (Willd.) Trin. Inverness Co.: bog, Loch Ban, Lake Ainslie, *M. S. Brown*, Aug. 15, 1944 (more or less typical); bog at head of MacGregor Brook, North Aspy River, *SECS 1163* (var. *cinnoides* (Link)

Hermann, det. W. G. Dore). As appears from the distribution map in Dore and Roland's Grasses (p. 256, sub *M. racemosa*), and from Dore's annotation on our collection, these constitute the first report from Cape Breton Island.

Zizania aquatica L., var. **interior** Fassett. Kings Co.: established in the Canard River, Canard, *A. E. Roland & W. G. Dore 3078*, Aug. 11. 1942. It has persisted at this station since then, and probably since the 1939 collection reported by Roland in RHODORA *43:* 338. 1941. This variety, which Fassett states does not range east of Indiana, was also established along the tidal banks of the Saint John River at Sheffield, N. B. (*W. G. Dore 2218*). "Both these are probably artificial establishments resulting from the attempts of sportsmen to encourage its growth to attract wildfowl"—Dore, ms. The var. *angustifolia* Hitchc. appears to have been introduced at the Long Lake station near Amherst, and has been found similarly at Port Hood, Inverness Co.—Dore, in litt.

Cyperus filiculmis Vahl. Antigonish Co.: sand behind beach, Pomquet, *W. G. Dore 1585*, July 20. 1940. An extension of range from Maine if, as seems likely, these immature plants belong to the var. *macilentus* Fern.

Carex prairea Dewey. (*C. diandra*, var. *ramosa* (Boott) Fern.). Kings Co.: in standing water of *Typha* swamp, Centreville, *David Erskine 938.*

C. atratiformis Britton. Victoria Co.: rock crevices, Salmon River, *SCBS 2653.* A relatively northern species, new to the province.

C. capillaris L., var. **major** Blytt. Inverness Co.: crevices in rock cliff, South Blair River, *SCBSB 3798.* Widely distributed in New Brunswick, but new to Nova Scotia.

C. livida (Wahl.) Willd., var. **Grayana** (Dewey) Fern. Richmond Co.: bog by Point Michaud road, *SECS 771.* This new collection from the same general area as the Louisburg report of Macoun appears to reinstate the species in the flora of Nova Scotia.

C. plantaginea Lam. Colchester Co.: hardwood hillside, Brookside, *A. E. Roland* May 20, June 20, 1951. This spring-flowering sedge has been reported for the Maritimes only from western New Brunswick.

C. hystricina Muhl. Kings Co.: swale along brook, North Mountain above Delhaven, *David Erskine 742;* Arlington, *G. C. Warren*, June 8, 1944; abundant in swamp north of Cornwallis River, Cambridge, *W. B. Schofield 56.* Nova Scotian records were needed to complete the range of this species in eastern Canada. In his Flora, Roland reports *C. lurida*, var. *gracilis* (Boott) Bailey as present in central Nova Scotia; from the description this may well refer to *C. hystricina.*

Lemna trisulca L. Inverness Co.: shallow water in cat-tail marsh by bridge, Scotsville, *A. E. Roland 686*, Aug. 25, 1950; Victoria Co.: slow-flowing stream, Baddeck Bridge, *SECS 1041.* These are the first collections from Cape Breton Island, but constitute only a slight eastward extension of range from Prince Edward Island and the Magdalens.

Juncus compressus Jacq. Inverness Co.: bog, North East Mabou, *SCBS 2817;* Richmond Co.: poorly drained sand by canal, St. Peter's, *A. E. Roland 666*, Sept. 8, 1950. These new records from the province are the first from Cape Breton, Rousseau's from Guysborough being the one previous, and the stations are, on the whole, consistent with the restriction of its eastern range in Canada to the Gulf of St. Lawrence area.

J. Dudleyi Wieg. Inverness Co.: wet meadow, Cheticamp, *SCBSB 3668.* New to Cape Breton, but found in Prince Edward Island. The only Nova Scotian record is of Long's collection from Middleton.

J. stygius L., var. **americanus** Buchenau. Inverness Co.: bog at head of MacGregor Brook, North Aspy River, *SCBS 2768*. The only collection known to Roland was Allen's from Isle Madame, made seventy years ago.

Luzula parviflora (Ehrh.) Desv., var. **melanocarpa** (Michx.) Buchenau. Cumberland Co.: woods road, Three Sisters, *SCBSB 3132*, new to mainland Nova Scotia and intermediate between the Strait of Canso and New Brunswick, an apparent gap in the ranges of several species which could perhaps be filled in for others—as it has been for *Solidago macrophylla* Pursh, collected at Moose Lake, Colchester Co., (*Smith, Collins & Schofield 1208*).

Sisyrinchium angustifolium Mill., sensu Fern. (*S. graminoides* Bickn.) Richmond Co.: wet gravelly border of McIntyre's Lake, *A. E. Roland 669*, Sept. 8, 1950. Although scattered from Yarmouth to Guysborough Co., this species has not been reported from Cape Breton.

Habenaria flava (L.) R. Br., var. **herbiola** (R. Br.) Ames & Correll. Annapolis Co.: field, Kemp's farm, Middleton, *Eric Hockey*, July 10, 1938; Kings Co.: low ground by river, Gaspereau, *J. S. & D. Erskine 160;* Inverness Co.: Cheticamp, *SCBSB 3650*. Hitherto known in Nova Scotia only by one collection from Guysborough Co., this variety seems to be general though local in the northern counties.

Scleranthus annuus L., listed by Roland as one to be expected in Nova Scotia, was reported by H. Groh in Canadian Weed Survey, Fourth Report, 1945, p. 14, from Kings Co.: Waterville (coll. Buchanan, 1940); since collected from the railroad at Windsor, Hants Co.: *J. S. Erskine 50.991* (in Provincial Museum of Science).

Stellaria Holostea L. Kings Co.: field below road, Starrs Point, *J. S. Erskine*, June 3, 1951. This seems rather a rare introduction, being the first record for the Maritime Provinces.

S. humifusa Rottb. Guysborough Co.: salt meadow, Marie Joseph, *SECS 625*. This seems to be the first station on the Nova Scotian mainland.

Brasenia Schreberi Gmel. Victoria Co.: pond, Middle Aspy River, Cape North, *SECS 1083*. This first Cape Breton Station seems to be the northeastern range limit of the species.

Ranunculus sceleratus L. Halifax Co.: damp roadside, Barrie Beach, *H. P. Bell*, July 18, 1935; *Jean W. McLellan*, July 21, 1937; sand beside brackish pond, Eastern Passage, *J. S. Erskine*, July 13, 1949; *H. P. Bell, A. Gorham, & J. S. Erskine*, July 21, 1949 (Station discovered by *M. S. Brown*). Although reported for the Nova Scotian flora in the eighth edition of Gray's Manual, this species was not included in Roland's Flora. It is also found along the coast in New Brunswick.

Anemone canadensis L. Victoria Co.: meadow, Bay St. Lawrence, *SCBS 2720;* Inverness Co.: meadow at end of pond, Presqu'ile, *SCBSB 3368;* meadow, Cheticamp, *SCBSB 3658*. The presence of this species in Nova Scotia was indicated in the eighth edition of Gray's Manual, though omitted from Roland's Flora.

Tillaea aquatica L. Cape Breton Co.: muddy pond behind beach, Catalogue, *SCBS 2853*, the third collection from the province and the first from Cape Breton.

Parnassia parviflora DC. Inverness Co.: damp grassy hollows in sand dunes, West Mabou Harbour, *SCBSB 3906*. The rediscovery of this species, so long on the books for Cape Breton, was one major excitement of last summer's collecting.

Sanguisorba canadensis L. Kings Co.: moist meadow, Scott's Bay, *J. S. Erskine*, Aug. 15, 1947, a recent collection from the Nova Scotian mainland, but perhaps, as Roland suggests for the previous ones, an introduction, for so conspicuous a plant could scarcely have been overlooked by M. E. Eaton who collected there in 1938.

Robinia hispida L. Kings Co.: south of Wolfville, *L. A. West, J. Wesley & R. Harlow*, Sept. 1943. An unreported introduction, unlikely to spread far, but still persistent on the bank opposite the College's University Avenue dump.

Empetrum atropurpureum Fern. & Wieg. (det. E. C. Smith). Inverness Co.: in mats along edge of sea-bluff, Pleasant Bay, *SECS 947; SCBS 2762; SCBSB 3983*, with *E. nigrum;* Victoria Co.: sheltered edges of exposure barren, seven miles west of Neil's Harbour on "Mary Ann Trail," *SCBSB 3825*. At this station the equally rare *E. Eamesii* was also collected, from hummocks in the barren, *SCBSB 3808*. *E. atropurpureum* is new to Cape Breton, and was collected in the province only by Macoun.

Floerkea proserpinacoides Willd. Inverness Co.: forming carpets in ravine hardwoods, Glenora, Mabou Highlands, *E. C. Smith, D. S. Erskine, D. R. Sampson & F. C. Bent 4016*. This station, first for Cape Breton and second for the province (see RHODORA *50:* 283. 1948), removed any possible doubt of the indigenous status of Floerkea in Nova Scotia, despite the distance beyond its generally ascribed northeastern limits.

Ilex glabra (L.) Gray. Cape Breton Co.: bog, Louisburg, *G. C. Warren*, July 28, 1938. A northeastward extension of range from Halifax to Cape Breton Island.

Hypericum majus (Gray) Britton. Victoria Co.: mossy woods road, Big Baddeck, *SECS 1065*. Some plants of the collection suggest an admixture of *H. canadense*.

Epilobium hirsutum L. Halifax Co.: beside Steele's Pond, Point Pleasant, Halifax, *J. S. Erskine*, Aug. 1, 1949. An introduced species as yet unreported from the Maritimes.

E. strictum Muhl. Antigonish Co. (so given; but apparently just across the line in Guysborough Co.): swamp three miles south of Merland, *SECS 662;* Kings Co.: swamp by main road, Hortonville, *David Erskine 757;* marsh, Habitant Creek, Sheffield Mills, *H. P. Bell, A. Gorham, J. S. Erskine, & D. Erskine*, July 14, 1950. This species, known from the Tantramar Marshes and common in Cape Breton, may now be reinstated in the mainland flora of the province.

Oenothera biennis L., var. **hirsutissima** Gray. Kings Co.: sand at foot of cliff, Starrs Point, *David Erskine 493*. A specimen from Guysborough Co.: beach, Cooks Cove, *H. G. Perry, R. H. Wetmore, G. C. Hicks & A. R. Prince 10223*, seems to belong here also. From Fernald's treatment of the subgenus *Onagra*, it would appear that *Oe. biennis*, not *Oe. muricata* which is a synonym of *Oe. parviflora* L., is the "common evening primrose" of Nova Scotia. He there reports this variety for the other Maritime Provinces only.

Zizia aurea (L.) Koch. Antigonish Co.: roadside along Pomquet River, *SCBSB 3173;* Halifax Co.: bank of stream, above Upper Musquodoboit, *SESB 4128*. An extension of range from New Brunswick.

Pimpinella Sagifraga L. Yarmouth Co.: weed, locally abundant, Pubnico, *A. E. Roland & D. Palfrey 703*, Sept. 15, 1950. For this report, first from Nova Scotia although it has long been known from the middle St. John River valley in New Brunswick, I am indebted to Dr. Roland.

Vaccinium caespitosum Michx. Kings Co.: rocky cliffs, Black River, *R. H. Wetmore*, June 12, 1920. Newly reported for the province. To M. E. Eaton goes the credit for first recognizing this specimen as a *Vaccinium.* The Prest (1905) record of *V. uliginosum* from barrens in the western and northern counties of Nova Scotia, mentioned by Roland, may well apply to this second species of the subgenus *Euvaccinium.* It is, at any rate, abundant in the Black River area, where we sought it after seeing specimens in the herbarium.

Teucrium canadense L. Richmond Co.: a patch by the bridge to Isle Madame, *A. E. Roland*, Sept. 8, 1950. This is the first record from Cape Breton, although the species was already known from both the north and south shores of the Nova Scotian mainland. The gap from Queens Co. to Richmond Co. is broken by the following collection: Halifax Co.: barrier beach, Queensland, St. Margarets Bay, *David Erskine 866*.

Origanum vulgare L. Hants Co.: covering a considerable area along the Wentworth Road, a mile west of Sweets Corner, *J. S. Erskine*, Sept. 17, 1949; *SCBSB 3998*. At this station it set no fruit and is spreading vegetatively only; first record of its establishment in the Maritimes.

Lycopus europaeus L. Halifax Co.: edge of ballast dump, Steele's Pond, Point Pleasant, Halifax, *J. S. Erskine & David Erskine*, Aug. 24, 1949. An adventive species very similar to *L. americanus*, newly recorded for the Maritimes.

Verbascum virgatum Stokes. Cape Breton Co.: in a cemetery, Sydney, *G. C. Warren*, July 1946. From the same county as Macoun's sole record, this collection indicates presence, though probably not persistence, of this species.

Cymbalaria muralis Gaertn., Mey., & Scherb. Yarmouth Co.: shady roadside, Vancouver Street, Yarmouth, *Claire Killam*, Sept. 2, 1948. This is the first report of the establishment of this introduction in Nova Scotia.

Linaria repens (L.) Mill. Kings Co.: orchard back of laundry, Acadia University, Wolfville, *L. Annis & I. MacDonald*, Oct. 13, 1944. The eighth edition of Gray's Manual settled the identification of these specimens, resolving a conflict in our concept of *L. canadensis* and providing us with a species new to Nova Scotia.

L. dalmatica (L.) Mill. Halifax Co.: roadside ditch, Hubbards, *J. S. Erskine & David Erskine 855*. We took the only specimen; therefore this second record (first from the provincial mainland see Fernald 1948) can scarcely be regarded as that of an established species.

Penstemon Digitalis (Sweet) Nutt. Kings Co.: north side of run-out field, top of Cape Blomidon, *Wilbert Spencer & Murray Zinck*, July 26, 1936. The extension of range of this species northeastward to Nova Scotia is in keeping with its weedy behavior.

Plantago indica L. (*P. arenaria* Waldst. & Kit.). Halifax Co.: railway yard, Halifax, *M. S. Brown*, Aug. 1950. The specimen, determined by Dr. Roland, and now in the Agricultural College herbarium at Debert, seems to represent the first introduction of this species to the Maritime Provinces.

Solidago hispida Muhl. Digby Co.: Sandy Cove, *R. Erskine*, Aug. 8, 1948. No stations are recorded in Roland's Flora of Nova Scotia, his one specimen having been lost in the fire.

Cotula coronopifolia L. Halifax Co.: salt marsh by sea, Prospect, *M. S. Brown*, Sept. 17, 1938; edge of brackish pond, beach at Eastern Passage, *J. S. Erskine*, July 13, 1949, *H. P. Bell, A. Gorham, & J. S. Erskine*, July 21, 1949. Known for fifty years from Prince Edward Island, and more recently collected

in New Brunswick on Grand Manan and at Lower Caraquet, Gloucester Co. (*W. G. Dore & E. Gorham, 45. 790*). This cosmopolitan species of muddy coasts was added to the flora of Nova Scotia by *M. S. Brown's* discovery of these stations.

Prenanthes racemosa Michx. Digby Co.: cliff-edge, Sandy Cove, *R. Erskine*, Aug. 8, 1948. This is the first collection of the species from the Nova Scotian mainland, but Macoun had reported it from Sydney Mines in Cape Breton.

WOLFVILLE, NOVA SCOTIA

NEW ZEALAND BOTANISTS[1]—On December 5, 1642, Abel Janszoon Tasman left Anthony van Dieman's Land for the islands of Solomon. Instead of his destination thirteen days later he reached what he named Staten Land, later changed to Nova Zeelandia. But it was not for two hundred more years that New Zealand was botanically explored beyond the fringes of her three principal islands. In fact, it was not until 1853–55 that J. D. Hooker's *Flora Novae-Zealandiae* was published, the first tabulation of the plant life. Of the total of 1571 vascular plants known in 1925, three-fourths are peculiar to the islands. 366 native species are common to other regions, chiefly Australia, but 108 species are common to South America and New Zealand. How this distinctive flora was made known is the theme of this attractive little volume.

The botanical exploration of New Zealand began Friday, October 8, 1769, when Cook landed at Poverty Bay—named because of the disappointing flora that the party encountered there. For the next seventy years reconnaissance was made by the British, French and American governments climaxing with the colonization by the British in 1840. In the first period of New Zealand's botanical history were visits by Allan and Richard Cunningham, Ernst Dieffenbach, John Carne Bidwell, and briefer visits by Archibald Menzies, Dumont D'Urville, Charles Darwin, etc. Each of these explorers in Miss Glenn's book is characterized more, however, by his discoveries than by his personality. This impersonal quality is, perhaps, the weakest thread in the fabric of her writing. Put aside the book and it is hard to recall a bit of anecdote that high-lighted more than one or two of the nearly thirty persons accounted for.

It is easier to personalize the figures that fall in the second period of botanical exploration or the last one hundred and ten years. Here appear such familiar figures as J. D. Hooker, who came on the *Erebus* as surgeon and naturalist, just as Dr. David Lyall served on the companion ship, the *Terror*, to chart the "Southern Ocean" and investigate terrestrial magnetism. From Hooker and Lyall's exploration of the main Auckland and Campbell islands came the material for Hooker's classic *Flora Antarctica* (1844); illustrated with 80 plates and describing 100 species, it is notable that the collections for this work were made in less than a month! Foremost resident botanist was Rev. William Colenso, who came in 1834 in time to guide Darwin the following year when he visited the islands on the voyage of the *Beagle*. Dr. Andrew Sinclair, surgeon with the H. M. S. *Sulphur*, which visited the coast of Lower California, reached New Zealand in 1841. Sinclair collected particularly on North Island and sent fine sets of plants to Kew. Unfortunately he was

[1] *Botanical explorers of New Zealand.* By Rewa Glenn. A. H. & A. W. Reed, Wellington, N. Z., pp. 176, *6 plates, frontispiece in color*, 1950. 13s. 2d.